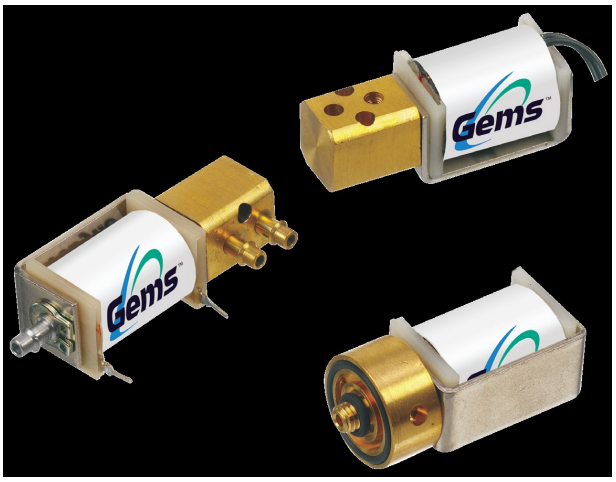
CO2 and O2 Control Valves:



The M Series implements efficient power conservation in a solenoid valve that is specifically designed for sub-miniature two- and three-way pneumatic and select liquid applications. Field proven to exceed performance requirements in battery-powered applications, the M Series can be designed for extreme low wattage conditions. With a compact size, consistent high-speed response time, and reliable operation over 200 million cycles, the M Series delivers extended performance and precision flow control in a small lightweight environment.

Manufactured to order, by GEMs sensors. These Valves are commonly used with the COS relay driver expander modules to provide CO2 and O2 control. These are one way valves, and are typically plumbed directly into the air supply line to the tank or pond. The valves provide control over pH and DO in both small to large tanks.

Designed for long life, these valves have been custom engineered by Predyne, specifically for use in the aquaculture industry. The valves are stocked by COS in small quantities, and require about 3 to 4 week lead times for bulk orders.

CO2 Control Valves: 10VDC, 1.4 W, with orifice 0.052, specifically designed for use with CO2 gas. Fitted with 6 inch quick disconnect leads. 098-MB205-S5

O2 Control Valves: 10VDC, 1.4 W, with orifice 0.031, specifically designed for use with O2 gas. Fitted with 6 inch quick disconnect leads. 098-SAM1009-MB202

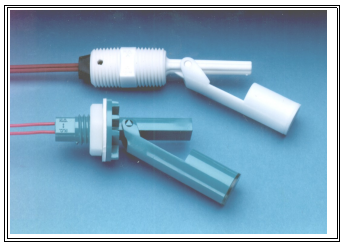
(Link to data sheet)

For more information, or assistance, call us at (831)-336-3403 or email support@cos-inc.com

ITEM ***PART NUMBER***

LEVEL and FLOW METERS:

We highly recommend the following level detectors and flow meters from IMO Industries, Gem Sensors division, for use in both fresh and salt water systems:



Model LS-7, Type VII, PolyPro float switches. 098-IMO-LS7
Approximately 6" long, 0.5 inches in diameter. The float tip has a travel range of approximately 1 inch. Mounts with 1/2 in. NPT fitting, either through a bulkhead wall plate on in a pcv pipe elbow. These are excellent switches, and easily tolerate high pH salt water environments.

Our level detectors are designed to work in conjunction with our MCU systems for use in tanks, vats, ponds and other applications. Used in combination with our 4-20mA motor speed controllers and a VFD drive on your pump, you can precisely control tank levels even under vary dynamic conditions. No more worrying about tank levels because of changing dynamics.

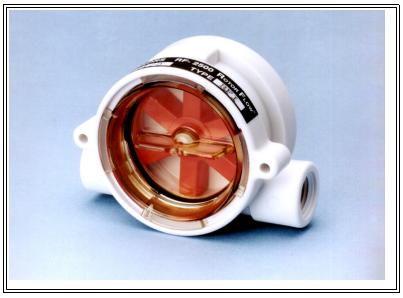
We use a variety of level detectors from Madison, Omega and Gem Sensors. The Gem detectors (shown above) are made of Polypropylene which is excellent for use in food-grade applications and give long life in both fresh and salt-water tanks.

The analog level detectors provide precise control over tank levels. They come in 3 foot to 16-foot lengths, and are made of high corrosion resistant Stainless steel. They include 4-20mA outputs or 0-5VDC outputs. They interface directly with our VFD controllers.

Digital controls include ultrasonic detectors from Omega and Cole-Parmer for high temp applications.

ITEM ***PART NUMBER***

Rotoflow flow meters:



GEMs sensors Model RFO Specifications.
Available in either low flow (.1 to 1 gpm), medium or high flow rates (20 GPM), 1/4 or 1/2 inch NPT port sizes. These are excellent, high grade rotating flowmeters, with a see-through port to get a visual confirmation on the impeller performance and flow condition. Twist lock opening for easy cleaning of rotor.

The electrical pulse output from the flowmeter is directly compatible with our Flowmeter Display panels. The panel supplies power to the flowmeter, and displays the calibrated flow rate on the built-in readout. The flow meter display panel may be locally controlled to display the flow rate of any one of the 64 inputs, and controlled by the MCU500 for data logging, monitoring and control of the system. The MCU can monitor any one, or all of the 64 flow rates, compute total flow for any group of flow meters, and perform control functions based on the results.

Lo-Flow Rate Flow Meter (0.5 to 5 GPM), 0.25 NPT: 098-IMO-155421
Hi-Flow Rate Flow Meter (4 to 20 GPM), 0.5 NPT: 098-IMO-155481

Note: The Lo-flow rate version comes with a restrictor for use with very low flow rates. The restrictor lowers the range by a factor of 5.

Bulk pricing is available on selected items.

COS also supplies mass flow meters for use with the MCU. These instruments provide precise monitoring of CO2 and O2 flows, and the MCU provides the capability to integrate the outputs over time to provide total flows, over any time frame you specify.

COS 64 channel Flow meter Display Panel: 200-30060-03
The readout panel shows the flow rate for any given flowmeter when on manual control. It automatically reverts to remote control, where the MCU controls the flowmeter selection. When used with an MCU, the MCU database may be set up to automatically log the individual flow rates, and accumulate total flow rates across multiple channels or groups of channels. The channels may also be set up to provide total volume for any given period. Please contact COS for further details.